

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

The Examiner objects to the drawings noting an inconsistency between the text and Figure 4 with respect to the identification of the receiver. Page 13, line 19 has been amended to properly identify the receiver with reference numeral 30. Withdrawal of the drawing objection is respectfully requested.

The Abstract has been objected to as being too long. The Abstract is amended to less than 150 words. Withdrawal of the objection to the Abstract is respectfully requested.

Claims 1-17 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,396,804 to Odenwalder. This rejection is respectfully traversed.

To establish that a claim is anticipated, the Examiner must point out where each and every limitation in the claim is found in a single prior art reference. *Scripps Clinic & Research Found. v. Genentec, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Every limitation contained in the claims must be present in the reference, and if even one limitation is missing from the reference, then it does not anticipate the claim. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). Odenwalder fails to satisfy this rigorous standard.

Odenwalder is directed to providing a high data rate CDMA interface. Different data rates can be achieved by varying the amount of selective sequence repeating performed and by transmitting data simultaneously over "non-specified transmit channels." See column 3, lines 64-column 4, line 2.

Unlike Odenwalder, Applicants recognize that in context of a system that employs fast adaptation of coding and modulation parameters, it is usually not known which modulation and/or coding scheme will be used until just prior to transmission because the channel condition

varies so quickly. As a result, a large amount of data packet processing must typically be performed after the channel condition is detected and the modulation and coding scheme is selected. If such a large amount of processing is to be completed quickly, processing capacity must be increased, and even then, there still may be processing delays before transmission. The Applicants recognized that certain processing tasks can be performed independently of the channel condition while others can not.

Independent claims 1 and 34 have been amended to explain that processing the pre-processed data packets includes "modulating the pre-processed data packets using a modulation scheme selected from a group of different modulation schemes based on the detected current channel condition." That processing also includes "coding the pre-processed data packets using a coding rates selected from a group of different coding rates based on the detected current channel condition." These features of claims 1 and 34 are not disclosed or suggested in Odenwalder.

In rejecting claims 1 and 11, the Examiner argues that the gain adjust circuits within modulator 104 in Figure 4 are adjusted based on a current target error rate channel condition. But the gain adjustment factors $A_0 - A_3$ are simply amplitude or power adjustments. Those adaptive gains do not, for example, change the particular modulation scheme being used. Odenwalder simply wants to increase the power if the channel conditions are not particularly good and decrease the power if channel conditions are better. Nor does Odenwalder code preprocessed data packets using a coding rate selected from a group of a coding rates based on the detected current condition.

Lacking multiple features of independent claims 1 and 34, the rejections of those claims as well as their dependent claims should be withdrawn. For example, dependent claims 15 and

43 recite that the processing includes "manipulating the combined pre-processed data packets to achieve a coding rate desired for the current condition." The Examiner again refers to the gain adjust circuits 152-158 in the modulator 104. Where in Figure 4 is there a change in the way pre-processed data packets are combined to achieve a coding rate for a detected current condition? The only thing that is adapted is the gain and not the manner in which data packets are manipulated to achieve the desired coding rate. The Examiner refers to Table II in column 8, but this table simply describes different encoder rates and repetition rates that may be selected to achieve different transmission rates. That selection is not described as being based on a detected current channel condition.

Claims 16 and 44 describe that the "manipulating is performed in accordance with a puncturing scheme selected based on the detected current channel condition that achieves the desired coding rate." The Examiner's statement of rejection of claim 17 points to no specific puncturing scheme, let alone one that is selected based on the detected current channel condition.

Claims 11 and 41 recite that the group of modulation schemes includes QPSK, 8-PSK, 16-QAM, 64-QAM. Odenwalder fails to disclose or suggest selecting one of those group of modulation schemes.

Claims 22 and 46, rewritten as independent claims, stand rejected under 35 U.S.C. §103 as being unpatentable over Odenwalder in view of U.S. Patent 6,397,367 to Park. This rejection is respectfully traversed.

If the combination of Odenwalder and Park were accepted for purposes of argument sake only, their combination still fails to disclose or suggest the claimed first and second processing stages wherein the second processing stage:

- combines the first and second channel encoded data blocks in a manner that depends on the detected current channel condition.
- selects a puncturing pattern based on the detected current channel condition.
- punctures one or more bits from the combined channel encoded block in accordance with the selected puncturing pattern to achieve a desired coding rate.
- selects one of plural modulation schemes based on the detected current channel condition.
- modulates the punctured data block in accordance with the selected modulation scheme.

The only thing adapted based on the current channel condition is Odenwalder's gain factors. But this is not what is claimed.

Regarding claims 26 and 50, there is no teaching in Odenwalder of determining the channel rate based on the detected channel condition. Simply setting a rate is from one of different achievable data rates is not the same thing as determining that rate based upon a detected channel condition.

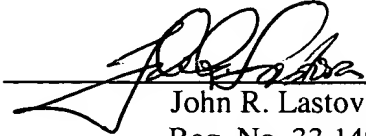
The application is in condition for allowance. An early notice to that effect is earnestly solicited.

Pål FRENGER et al.
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Respectfully submitted,

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